What Is Claimed Is:

Having this described our invention, what we claim as new, and desire to secure by Letters Patent is:

Sub A1

1. A white point adjusting method for adjusting an achromatic color level to be displayed on a liquid crystal module for an input video signal including a plurality of color signals, comprising:

a first step of setting a white point by deciding an offset quantity of at least one color signal from a highest gray level for each color temperature;

a second step of setting an offset quantity of the color signal in a direction of converging a halftone white point for each color temperature set in the first step; and

a third step of adjusting chromaticity on a screen of the liquid crystal module by adding the offset quantity decided in the first step and the offset quantity set in the second step to the input video signal.

2. The white point adjusting method according to claim 1, wherein said input video signal is composed of R, G and B color signals, the white point setting in the first step is executed by using a prescribed color temperature as a default value, and luminance of the R and G color signals is reduced when a color temperature is set to a high temperature side with respect to the prescribed color temperature.

3. The white point adjusting method according to claim 2, the method further comprising:

a step of adjusting luminance of the entire input

video signal after a white point is set in the first step.

4. The white point adjusting method according to claim 1, wherein said offset quantity set in the second step is calculated with accuracy of bits larger in number than bits of the input video signal.

5. A color image processing method for supplying an entered video gray level signal to a display panel for outputting a color image, comprising the steps of:

setting an achromatic color of a particular gray level at a specified color temperature on the basis of a set transformation quantity;

setting an adjusting value for converging a halftone achromatic color different from the achromatic color of the particular gray level toward the specified color temperature; and

adding the set adjusting value to the video gray level signal, and then supplying the signal to the display panel.

6. The color image processing method according to claim 5,

the method further comprising:

a step of correcting deterioration of luminance in the display panel following the setting of a highest gray level achromatic color.

7. The color image processing method according to claim 5, wherein the step of setting the adjusting value is provided independently of a contrast adjustment executed

by a driver for driving the display panel, and the adjusting value is set on the basis of a set value when the contrast adjustment is carried out.

8. A white point adjusting apparatus for adjusting an achromatic color level for an input video signal including a plurality of color signals, and displaying an adjusted image on a liquid crystal display module, comprising:

a first reference table for setting a white point by deciding an offset quantity of at least one color signal from a highest gray level for each color temperature; and

a second reference table for setting an offset quantity of the color signal to converge a halftone white point for each color temperature set by the first reference table,

wherein the offset quantities set by the first and second reference tables are added to the input video signal.

9. The white point adjusting apparatus according to claim 8, wherein said first reference table is constituted to increase blue luminance in relative fashion when the color temperature is set to a high temperature side.

10. The white point adjusting apparatus according to claim 8,

further comprising:

an inverter for adjusting a change of luminance on the liquid crystal display module on the basis of the offset quantity set by the first reference table.

11. The white point adjusting apparatus according to claim 8, wherein said second reference table transforms gray level coordinates arrayed at equal intervals in γ curve of the color signal into gray level coordinates at unequal intervals corresponding to desired luminance.

12. A liquid crystal display device comprising:

a driver for driving a liquid crystal cell on the basis of adjusted R, G and B color signals, and executing a contrast adjustment for the liquid crystal cell according to user setting;

setting means provided in a stage before the driver to set a white point of a particular gray level according to a hue of a specified white color; and

adjusting means provided independently of the driver to make an adjustment in order to substantially maintain the hue of the white color set by the setting means for gray scales other than the particular gray level.

13. The liquid crystal display device according to claim 12, wherein said adjusting means maintains the hue of the white color for each gray level irrespective of the contrast adjustment executed by the driver.

14. The liquid crystal display device according to claim 12, wherein said adjusting means adjusts distribution of luminance among the R, G and B color signals by adding an offset quantity into original γ characteristic of each of the entered R, G and B color signals, and then outputs a result thereof to the driver.

15. The liquid crystal display device according to claim 14, wherein said adjusting means changes the offset quantity on the basis of a reference voltage applied following the contrast adjustment executed by the driver.